

## NEW GENERA AND NEW SPECIES OF MICROPTEROUS COLPURINI FROM BURU ISLANDS AND NEW GUINEA (HETEROPTERA: COREIDAE)

HARRY BRAILOVSKY

Departamento de Zoología, Instituto de Biología,  
Universidad Nacional Autónoma de México,  
Apdo Postal 70153, México 04510 D.F., México

*Abstract.*—Three new genera and three new species, collected in Buru Islands and New Guinea are described in the tribe Colpurini (Coreidae). Dorsal habitus illustrations and drawings of the male genital capsule are provided.

*Key Words.*—Insecta, Hemiptera, Heteroptera, Coreidae, Colpurini, Buru Islands, New Guinea

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This is the third contribution in a series of papers aimed at resolving taxonomic problems within the Indo-Pacific Colpurini fauna published concurrently with a series of more comprehensive revisions (Brailovsky 1990, 1992; Dolling 1987).

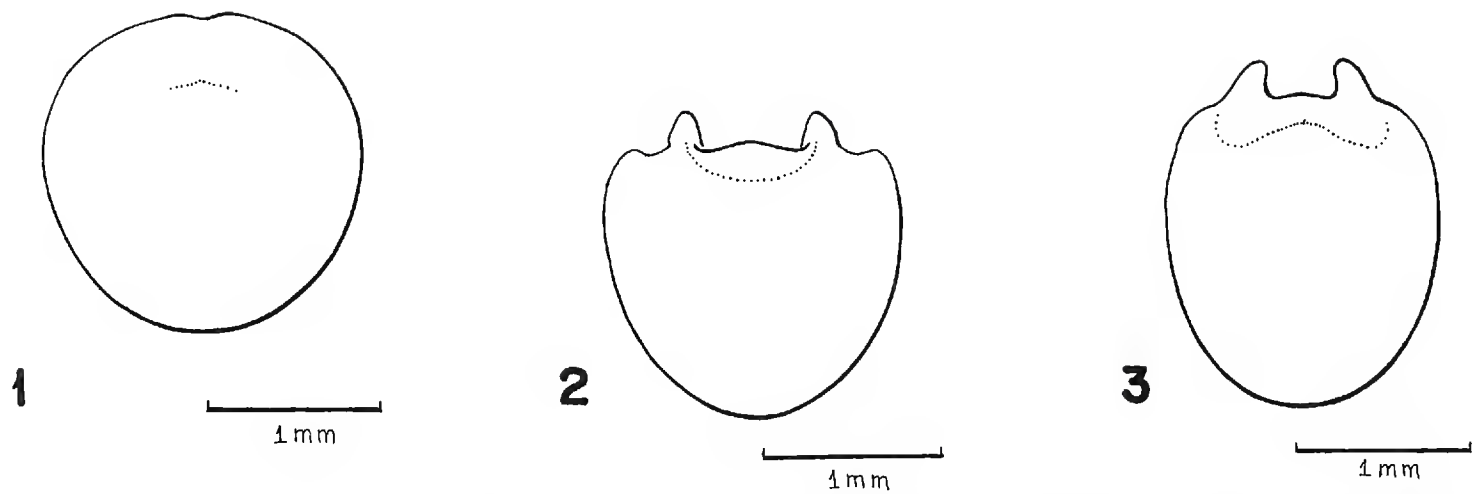
One of the striking features of the tribe Colpurini is the large number of undescribed species that exhibit wing polymorphism. The reduction of wings is a well known phenomenon and occurs frequently in many, if not most, other families of Heteroptera (Slater 1975). The three new genera and three new species proposed here from Buru Islands and New Guinea are micropterous; their wings are widely to scarcely separated from each other, reaching anterior or posterior one-third of abdominal segment I or II, with clavus and corium fused and the membrane always represented by a small flap.

*Depository Abbreviations.*—The institutions where types are deposited, and from which the specimens were loaned are: Bernice P. Bishop Museum, Honolulu, Hawaii (BPBM); Colección Entomológica del Instituto de Biología, Universidad Nacional Autónoma de México (IBUNAM); Zoologisches Museum, Universiteit van Amsterdam, Netherlands (ZMUA).

### *BURUHYGIA* BRAILOVSKY, NEW GENUS

*Type species.*—*Buruhygia parva* Brailovsky, NEW SPECIES.

*Description.*—Head pentagonal, wider than long and dorsally slightly convex; tylus basally globose, unarmed, apically truncate, extending anterior to jugae and seen laterally extending above them; antenniferous tubercles unarmed, with truncated apex; jugae unarmed; sides of head in front of eyes unarmed, straight and shorter than total length of eyes; antennal segment I shortest, robust, thickest, slightly curved outwards and shorter than head; segments II and III cylindrical and slender; segment IV fusiform and longer than III; antennal segment II longest; ocelli absent; posterior pit between eyes deep and diagonally excavated; eyes spherical; postocular tubercles protuberant; bucculae rounded, short, not projecting beyond anterior one-third of antenniferous tubercles, with sharp mesial projection; rostrum long, reaching anterior one-third of abdominal sternite VI. Thorax. Pronotum: Trapeziform, wider than long; collar wide; frontal angles obliqually straight to slightly bilobated; humeral angles rounded, not exposed; posterolateral and posterior edge straight; pronotal disc laterally with small depression. Anterior lobe of metathoracic scent gland globose, posterior lobe sharp, small. Legs: Femora armed with 2 subdistal short spines and few more scattered along ventral surface; tibiae cylindrical, sulcated and much more slender than femora. Scutellum: Hemispheric, wider than long, with apex



Figures 1–3. Frontal view of the male genital capsule. Figure 1. *Buruhygia parva* Brailovsky NEW SPECIES. Figure 2. *Heisshygia novoguineensis* Brailovsky NEW SPECIES. Figure 3. *Missimhygia tyttos* Brailovsky NEW SPECIES.

rounded; disc slightly convex. Hemelytra: Micropterous, reaching anterior one-third of abdominal segment I; clavus and corium fused into coriaceous pad, wings widely separated from each other leaving abdomen exposed mesally; membrane represented by small flaps. Abdomen: Abdominal segments convexly elevated; posterior angle of connexival entire, not extended into short spine; abdominal sternites with medial sternal furrow projecting to anterior border of sternite VI. Integument: Body surface rather dull. Thorax and exposed parts of genital segments of both sexes punctate. Head, pronotum, scutellum, hemelytra, legs and abdomen with long to short decumbent to suberect bristle-like hairs.

*Male Genitalia.*—Genital capsule. Simple, globose; posteroventral edge entirely, with small mesial concavity (Fig. 1).

*Female Genitalia.*—Abdominal sternite VII without plica or fissure; gonocoxae I square and larger; paratergite VIII short, square, with spiracle visible; paratergite IX nearly square, larger than paratergite VIII.

*Diagnosis.*—*Buruhygia* NEW GENUS, like its closely related genus *Sciophyrus* Stål, has the tylus apically globose or truncate, the antenniferous tubercles unarmed, the bucculae rounded with a sharp mesial projection and the abdominal sternite VII of female without a plica or fissure. *Buruhygia* can be recognized by its micropterous condition, absent ocelli and a hemispheric scutellum that is apically rounded and wider than long. *Sciophyrus* is always macropterous or submacropterous; it has conspicuously developed ocelli, and a triangular scutellum that is longer than wide, with its apex acute or truncated.

*Distribution.*—Only known from Buru Islands.

*Etymology.*—Named for its occurrence in Buru Islands.

*Material Examined.*—*Buruhygia parva*.

*Buruhygia parva*, Brailovsky NEW SPECIES  
(Figs. 1, 4)

*Types.*—Holotype; male; data; BURU ISLANDS. Station 9, 1–28 Jun 1921, L. J. Toxopeus. Deposited in Zoologisches Museum, Universiteit van Amsterdam, Netherlands. Paratype: 1 female; data: BURU ISLANDS. Station 8, Feb 1922, L. J. Toxopeus. Deposited in the “Colección Entomologica del Instituto de Biología, UNAM, México.”

*Description.*—*Male* (holotype). Coloration: Head brown-red with following areas yellow to orange-yellow: a short longitudinal band running close to eyes, external face of postocular tubercle and rostral

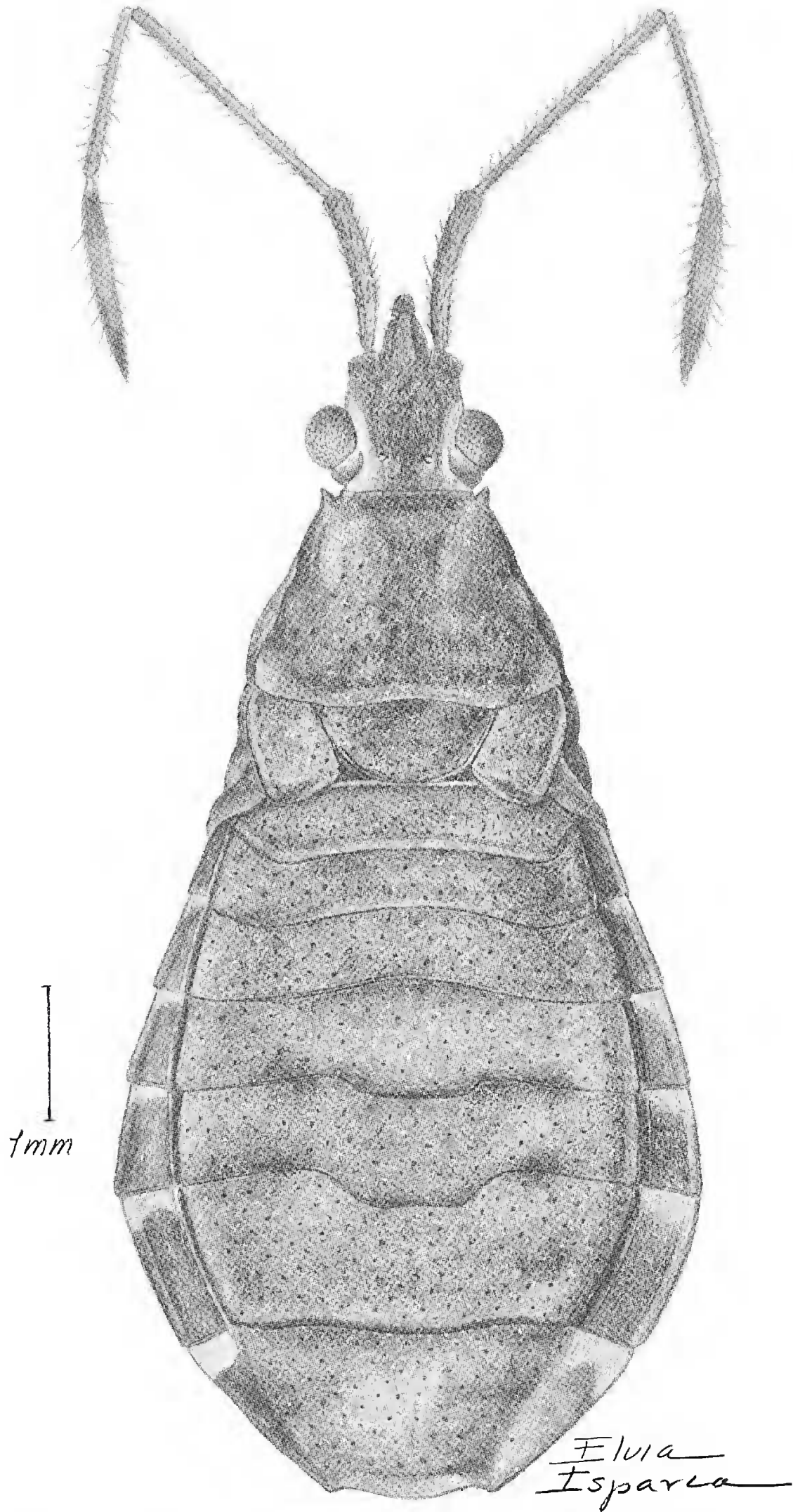


Figure 4. Dorsal view of *Buruhygia parva* Brailovsky NEW SPECIES.

segments I to IV; antennal segment I dark orange-hazel and segments II to IV pale orange-hazel; pronotum, scutellum, hemelytra, thorax and abdomen pale orange with following areas pale yellow: irregular spots scattered over body, costal margin of hemelytra, anterior margin of connexival segments II to VII, anterior angle of pleural sternites III to VII and anterior lobe of metathoracic scent gland; coxae brown-red with pale orange reflections; trochanters orange-hazel with bright yellow reflections; anterior and middle femora yellow, with apical one-third, 1 or 2 incomplete rings and few scattered spots dull orange; posterior femora brown-red with following areas yellow: basal one-third and 2 incomplete rings near central axis; anterior tibiae alternating 2 yellow rings with 3 dark orange rings; middle and posterior tibiae dull orange with 1 yellow ring near the middle line; tarsi dark orange with yellow reflections. Measurements: Head length: 1.40 mm; width across eyes: 1.64 mm; interocular space: 0.84 mm; preocular distance: 1.00 mm. Length of antennal segments: I, 1.28 mm; II, 1.96 mm; III, 1.36 mm; IV, 1.50 mm. Pronotal length: 1.52 mm; width across frontal angles: 1.44 mm; width across humeral angles: 2.44 mm. Scutellar length: 0.60 mm; width: 1.20 mm. Total body length: 8.94 mm.

*Female* (paratype).—Coloration: Brown-red with following areas yellow to orange-yellow: tylus, a short longitudinal band running close to eyes, external face of postocular tubercle, rostral segments, few irregular spots scattered through the body, costal margin of hemelytra, anterior margin of connexival segments III to VII, anterior angle of pleural sternites III to VII and anterior lobe of metathoracic scent gland; antennal segments and legs similar to holotype. Measurements: Head length: 1.54 mm; width across eyes: 1.72 mm; interocular space: 0.90 mm; preocular distance: 1.03 mm; length of antennal segments: I, 1.40 mm; II, 2.16 mm; III, 1.44 mm; IV, 1.48 mm. Pronotal length: 1.60 mm; width across frontal angles: 1.56 mm; width across humeral angles: 2.54 mm. Scutellar length: 0.68 mm; width: 1.28 mm. Total body length: 9.85 mm.

*Diagnosis.*—*Buruhygia parva* is the only species in the genus.

*Etymology.*—Named for its small size; from the Latin “parva,” meaning rather small.

*Material Examined.*—See types.

### HEISSHYGIA BRAILOVSKY, NEW GENUS

*Type Species.*—*Heisshygia novoguineensis* Brailovsky, NEW SPECIES.

*Description.*—Head: Pentagonal, longer than wide, and dorsally slightly convex; tylus projecting anteriorly of jugae, upturned to form sharp long horn; jugae unarmed, thick and shorter than tylus; antenniferous tubercles armed, lobes raised, diverging anteriorly and apically rounded; sides of head anteriorly of eyes unarmed and straight; antennal segment I robust, thickest, slightly curved outwards and slightly shorter than head; segments II and III cylindrical and slender; segment IV shortest and fusiform; segment II longest; segments I and III subequal; ocelli absent; posterior pit between eyes deep and diagonally excavated; eyes spherical; postocular tubercles protuberant; bucculae rounded, short, not projecting beyond anterior one-third of antenniferous tubercles, with sharp mesial projection; rostrum long, reaching anterior one-third of abdominal sternite V. Thorax. Pronotum: Trapeziform, wider than long; collar wide; frontal angles produced forward as round small lobe; anterolateral edges almost straight; humeral angles rounded, not exposed and noticeably elevated above disc; posterior edge straight; pronotal disc flat, posteriorly with median depression. Anterior lobe of metathoracic scent gland globose, posterior lobe sharp, small. Legs: Femora armed with 2 rows of spines along ventral surface; tibiae cylindrical, sulcated and much more slender than femora. Scutellum: Triangular, wider than long with apex rounded; disc almost flat. Hemelytra: Micropterous, reaching posterior one-third of abdominal segment II; clavus and corium fused into coriaceous pad and wings widely separated from each other, leaving abdomen exposed mesally; membrane represented by small flap. Abdomen: Connexival segments higher than body; posterior angle of connexival extended into short wide projection; abdominal sternites with medial furrow projecting to anterior border of sternite VI. Integument: Body surface rather dull. Head, pronotum, scutellum, clavus, corium, thorax, abdominal sternite and exposed parts of genital segments of both sexes punctate. Head, pronotum, scutellum, hemelytra, thorax and abdominal sternite with long to short decumbent to suberect bristle-like hairs.

*Male Genitalia.*—Genital capsule. Simple and semiglobose; posteroventral edge with 2 short lateral projections, surrounding a broad middle plate (Fig. 2).

*Female Genitalia.*—Abdominal sternite VII with plica and fissure; plica triangular, reaching medial one-third of sternite VII; gonocoxae I square-shaped and larger; paratergite VIII short, square, with spiracle visible; paratergite IX nearly square, larger than paratergite VIII.

*Diagnosis.*—*Acanthotyla* Stål, *Agathyrna* Stål, *Brachylybas* Stål and *Heisshygia* NEW GENUS, show the apex of tylus projected as a short or large spine. *Heisshygia* can be distinguished by its absent ocelli and the abdominal sternite VII of the female bearing a plica and fissure. On the other three genera, the ocelli are always present and the abdominal sternite VII of their females are without a plica or fissure. In *Lygaeopharus* Stål, the ocelli are reduced or absent, but the apex of tylus is globose and truncate, the bucculae is rounded without teeth or spines and the femora are unarmed; *Heisshygia* differs in having a spiny projection on the bucculae and all femora armed.

*Distribution.*—Only known from New Guinea.

*Etymology.*—This genus is named for Eng. Ernest Heiss, distinguished Austrian hemipterist.

*Material Examined.*—*Heisshygia novoguineensis*.

*Heisshygia novoguineensis*, Brailovsky NEW SPECIES  
(Figs. 2, 5)

*Types.*—Holotype: male; data: NEW GUINEA (NE). 30 km S of Garaina, 2000 m, 9 Jan 1968, J. and M. Sedlacek. Deposited in Bernice P. Bishop Museum, Honolulu, Hawaii. Paratypes: 2 females; data: NEW GUINEA (NE). Wau, 1150–1250 m, 22–23 Feb 1966, J. Sedlacek. One paratype deposited in Bernice P. Bishop Museum, Honolulu, Hawaii, the other in the “Coleccion Entomologica del Instituto de Biología, UNAM, México.”

*Description.*—*Male* (holotype). Dorsal coloration: Dull brown-red with orange reflections; apex of scutellum light yellow; antennal segments I to III dark brown-red and IV dark orange-hazel. Ventral coloration: Bright orange-hazel; head somewhat redder; anterior lobe of metathoracic scent gland creamy-yellow; coxae, trochanter, prosternum, mesosternum and metasternum light orange-hazel. Measurements: Head length: 1.89 mm; width across eyes: 1.76 mm; interocular space: 1.08 mm; preocular distance: 1.32 mm. Length antennal segments: I, 1.80 mm; II, 2.52 mm; III, 1.80 mm; IV, 1.44 mm. Pronotal length: 1.96 mm; width across frontal angles: 1.60 mm; width across humeral angles: 3.68 mm. Scutellar length: 1.20 mm; width: 1.40 mm. Total body length: 10.80 mm.

*Female.*—Color: Similar to male. Measurements: Head length: 2.07 mm; width across eyes: 1.88 mm; interocular space: 1.16 mm; preocular distance: 1.38 mm. Length antennal segments: I, 1.80 mm; II, 2.56 mm; III, 1.80 mm; IV, 1.48 mm. Pronotal length: 2.20 mm; width across frontal angles: 1.76 mm; width across humeral angles: 3.76 mm. Scutellar length: 1.36 mm; width: 1.60 mm. Total body length: 12.50 mm.

*Diagnosis.*—*Heisshygia novoguineensis* is the only species in its genus.

*Etymology.*—Named for its occurrence in New Guinea.

*Material Examined.*—See types.

*Missimhygia* Brailovsky, NEW GENUS

*Type species.*—*Missimhygia tythos* Brailovsky, NEW SPECIES.

*Description.*—Head: Pentagonal, wider than long, dorsally flat; tylus projecting in front of jugae, apically upturned to form blunt median horn, basally globose and seen laterally higher than them; jugae unarmed, thick and shorter than tylus; antenniferous tubercles armed with wide lobes, diverging

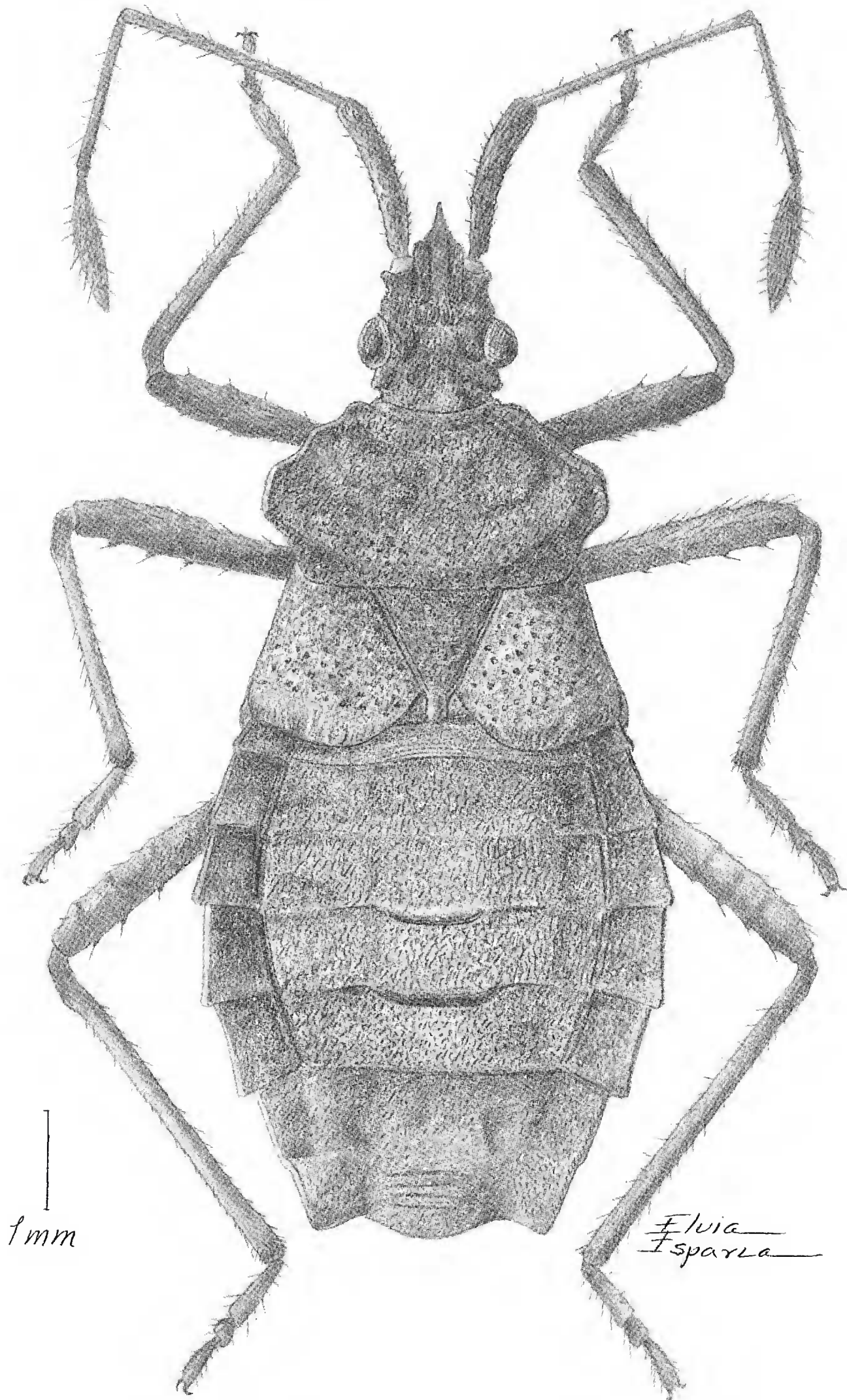


Figure 5. Dorsal view of *Heisshygia novoguineensis* Brailovsky NEW SPECIES.

anteriorly and apically rounded; sides of head anterior of eyes unarmed, straight and shorter than total length of eyes; antennal segment I robust, thickest, slightly curved outwards and shorter than head; segments II and III cylindrical and slender; segment IV fusiform and shorter than I; segment II longest and III shortest; ocelli and posterior pit between eyes absent; eyes globose, exposed; postocular tubercles conspicuously protuberant; bucculae rounded, elevated, not projecting beyond antenniferous tubercles, external edge without teeth and buccular disc with short conical tubercle; rostrum long, reaching posterior one-third of abdominal sternite V. Thorax. Pronotum: Wider than long, rectangular and clearly bilobate; anterior lobe shorter than posterior lobe, with lateral margin moderately elevated, exposed and resembling short truncated wing; posterior lobe laterally almost straight to subbilobate; anterior collar wide; frontal angles rounded; humeral angles rounded, not exposed; posterolateral and posterior border straight; posterior lobe with deep elongated depression, located on middle point. Anterior lobe of metathoracic scent gland reniform, posterior lobe sharp, small. Legs: Femora tuberculated along ventral and dorsal surface; tibiae cylindrical, sulcated and much more slender than femora. Scutellum: Triangular, wider than long, with apex acute; disc flat to concave. Hemelytra: Micropterous, reaching posterior one-third of abdominal segment II; clavus and corium indistinguishably fused into coriaceous pad, wings scarcely separated from each other; costal margin convexly exposed; membrane represented by small flap. Abdomen: Connexival segments higher than body; posterior angle of connexival entirely, not extended as short spine; abdominal sternites with medial sternal furrow projecting to anterior border of sternite V. Integument: Body surface bright, not dull. Thorax, hemelytra, abdominal sterna and genital capsule punctate. Head, pronotum, scutellum, hemelytra, legs and abdomen with long to short decumbent to suberect bristle-like hairs.

*Male Genitalia.*—Genital capsule simple, semiglobose; posteroventral edge with 2 robust lateral arms surrounding a broad middle plate (Fig. 3).

*Female.*—Unknown.

*Diagnosis.*—Like *Acanthotyla* Stål, *Agathyrna* Stål, *Brachylybas* Stål, and *Heisshygia* Brailovsky, this shows the apex of tylus upturned on a short or large spine. *Heisshygia* and *Missimhygia* NEW GENUS have the ocelli absent, whereas in the three other genera the ocelli are always present. *Missimhygia* can be recognized by a bilobate pronotum, a head wider than long, an entire external edge of the bucculae, an acute apex of the scutellum, a convexly exposed costal margin of the hemelytra, and a femora that is tuberculated dorsally and ventrally. The closely related genus *Heisshygia* has the pronotum trapeziform and not bilobate, the head longer than wide, the bucculae with a sharp mesial projection, the apex of scutellum rounded, the costal margin of hemelytra straight and not exposed, and the femora smooth dorsally, with two rows of spines along the ventral surface.

*Distribution.*—Only known from New Guinea.

*Etymology.*—Named for its occurrence in Mt. Missim, New Guinea.

*Material Examined.*—*Missimhygia tythos*.

#### *MISSIMHYGIA TYTHOS* BRAILOVSKY, NEW SPECIES (Figs. 3, 6)

*Type.*—Holotype: male; data: NEW GUINEA (NE). Mt Missim, 2400–2800 m, 22–30 Apr 1968, J. L. Gressitt, R. C. A. Rice and J. Sedlacek. Deposited in Bernice P. Bishop Museum, Honolulu, Hawaii.

*Description.*—Male (holotype). Coloration: Dorsally bright hazel-brown with orange reflections and ventrally paler; antennal segments I to III hazel-orange and IV paler; rostral segments pale orange; anterior lobe of metathoracic scent gland dirty creamy-yellow. Measurements: Head length: 1.40 mm; width across eyes: 1.70 mm; interocular space: 1.04 mm; preocular distance: 1.00 mm. Length of antennal segments: I, 1.20 mm; II, 1.40 mm; III, 1.08 mm; IV, 1.16 mm. Pronotal length of anterior lobe: 0.56 mm; pronotal length of posterior lobe: 1.00 mm; width across anterior lobe: 2.36 mm;

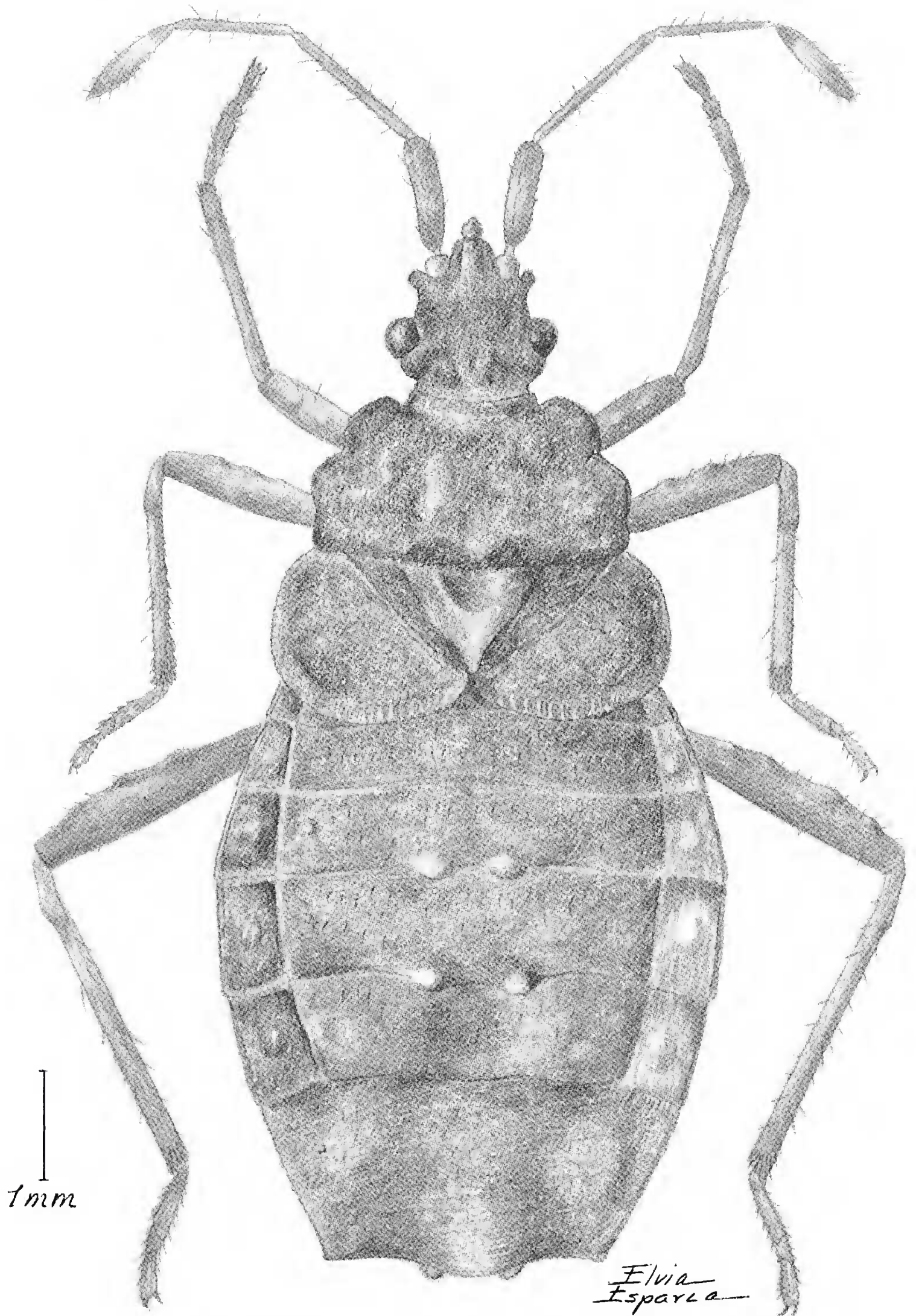


Figure 6. Dorsal view of *Missimhygia tythos* Brailovsky NEW SPECIES.



width across posterior lobe: 2.76 mm. Scutellar length: 0.88 mm; width: 1.08 mm. Total body length: 9.45 mm.

*Diagnosis.*—*Missimhygia tythos* is the only species in the genus.

*Etymology.*—Named for its small size; from the Greek “tythos,” meaning small.

*Material Examined.*—See types.

#### ACKNOWLEDGMENT

I am indebted to the following individuals and institutions for the loan of specimens and other assistance relevant to this study: Gordon M. Nishida (Bernice P. Bishop Museum, Honolulu); and W. Hogenes (Zoologisches Museum, Universiteit Van Amsterdam, Netherlands). Special thanks for Biol. Ernesto Barrera, Biol. Albino Luna and Mrs. Elvia Esparza for the preparation of illustrations (each one of the Instituto de Biología, Universidad Nacional Autónoma de México).

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*Received 13 October 1992; accepted 6 May 1993.*